

WHAT IS CLAIMED IS:

1. An optical body comprising at least a first effective optical packet of contiguous optical layers bounded by optically thick layers, the optical layers composed of alternating diverse materials A,B;

5 wherein the optical layers when counted from one end of the first effective optical packet form a plurality of unit cells each having six optical layers arranged in relative optical thicknesses in a first cyclic permutation of 7A1B1A7B1A1B;

10 wherein at normal incidence the first effective optical packet provides a reflection band at infrared wavelengths and substantially transmits light at visible wavelengths;

15 wherein the materials A,B have refractive indices that satisfy a relationship $n_A > n_B$ along at least one in-plane axis, and wherein the optically thick layers that bound the first effective optical packet have a refractive index n_C along the at least one in-plane axis;

wherein the optical body exhibits a variability in transmission over a visible wavelength range; and

20 wherein said variability in transmission is lower than that exhibited by a second optical body identical to the first-mentioned optical body except for having a second effective optical packet substituted for the first effective optical packet, the second effective optical packet having optical layers arranged in a second cyclic permutation of 7A1B1A7B1A1B different from the first cyclic permutation.

25 2. The optical body of claim 1, wherein the second effective optical packet has a total number N of optical layers that differs from a total number M of optical layers of the first effective optical packet by no more than six.

3. The optical body of claim 1, wherein the first effective optical packet consists essentially of an integer number of unit cells.

4. The optical body of claim 1, wherein the first effective optical packet consists essentially of a noninteger number of unit cells.
5. The optical body of claim 1, wherein $n_A > n_C > n_B$, and wherein the first effective optical packet exhibits reverse symmetry or reverse pseudo-symmetry with respect to a plane in the packet.
6. The optical body of claim 1, wherein n_C equals one of n_A and n_B , and wherein the first effective optical packet exhibits symmetry or pseudo-symmetry with respect to a plane in the packet and wherein the first effective optical packet consists essentially of one optical layer less than an integer number of unit cells.

10 7. The optical body of claim 1, wherein the optical body further comprises a first layer of glazing material.

8. The optical body of claim 7, wherein the optical body further comprises a second layer of glazing material, and the first effective optical packet is disposed between the first and second layers of glazing material.

15 9. The optical body of claim 8, further comprising a layer including PVB disposed between the first effective optical packet and each of the first and second layers of glazing material.

10. The optical body of claim 1, wherein the unit cells within the first effective optical packet have optical thicknesses that vary along a thickness axis of the packet according to a layer thickness gradient.

20 11. The optical body of claim 1, wherein the optical body reflects at least 50% of light in a band at least 100 nm wide positioned between wavelengths from about 700 nm to about 2000 nm.

12. The optical body of claim 1, wherein the optical body comprises a third effective optical packet having a contiguous arrangement of third unit cells of like design, each such third unit cell consisting essentially of two optical layers.

25 13. The optical body of claim 1, wherein a first optical layer disposed at the one end of the first effective optical packet and a second optical layer disposed at an opposite end of the first

effective optical packet are selected from among the sequence of six optical layers 7A1B1A7B1A1B to minimize said variability in transmission.

14. The optical body of claim 1, wherein said variability in transmission is evaluated from 400 to 600 nm.

5 15. The optical body of claim 1, wherein said variability in transmission is evaluated from 400 to 700 nm.

10 16. A film comprising an optical stack, the optical stack comprising at least one effective optical packet having a contiguous arrangement of unit cells of like design, the at least one effective optical packet including a first effective optical packet in which each unit cell has more than two optical layers of at least a first and second diverse material, such optical layers being arranged to exhibit within the packet a characteristic, with respect to a plane in the packet, selected from the group consisting of pseudo-symmetry, reverse symmetry, and reverse pseudo-symmetry.

15 17. The film of claim 16, wherein the first effective optical packet is bounded by at least one boundary layer, and the index of refraction of the boundary layer is equal to an index of refraction of one of the first and second diverse materials.

18. The film of claim 16, wherein the optical stack comprises a second effective optical packet having a contiguous arrangement of second unit cells of like design, each such second unit cell consisting essentially of one A layer and one B layer.

20 19. The film of claim 16, wherein each unit cell in the first effective optical packet has six optical layers arranged with relative optical thicknesses of about 7A1B1A7B1A1B.

20. A pre-laminate comprising a layer of an energy absorbing material and the film of claim 16.

25 21. A method of controlling noise in a visible region of the spectrum in a multilayer film that reflects in an infrared region, the multilayer film having at least a first effective optical packet of optical layers arranged in unit cells, such unit cells being composed of more than two such optical layers, the method comprising selecting a first optical layer disposed at a first

end of the first effective optical packet from among the more than two optical layers in the unit cells so as to control variability in transmission over a visible wavelength range.

22. The method of claim 21, further comprising selecting a second optical layer disposed at a second end of the first effective optical packet from among the more than two optical

5 layers in the unit cells so as to control variability in transmission over said visible wavelength range.

23. The method of claim 22, wherein the selecting steps are performed to reduce the variability in transmission over said visible wavelength range.

24. The method of claim 23, wherein said visible wavelength range associated with said 10 variability in transmission comprises 400 to 600 nm.

25. The method of claim 23, wherein said visible wavelength range associated with said variability in transmission comprises 400 to 700 nm.

26. The method of claim 22, wherein the unit cells consist essentially of six optical layers of alternating materials A,B.

15 27. The method of claim 26, wherein the six optical layers have relative optical thicknesses of 7A1B1A7B1A1B or a permutation thereof.

28. The method of claim 21, further comprising:

calculating an amount of variability in transmission over said visible wavelength range for a first embodiment of the multilayer film in which a first optical layer is disposed at a first end of the first effective optical packet; and

20 calculating an amount of variability in transmission over said visible wavelength range for a second embodiment of the multilayer film in which a second optical layer different from the first optical layer is disposed at the first end of the first effective optical packet.

25 29. The method of claim 28, further comprising:

comparing the amount of variability calculated for said first embodiment with the amount of variability calculated for said second embodiment.